Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Inductors

Transponder coils
Size 7.8 × 2.7 × 2.7 (mm)

Series/Type: **B82450A*E**

Date: October 2015

EPCOS AG is a TDK Group Company.

Transponder coils B82450A*E

Size 7.8 x 2.7 x 2.7 (mm)

SMD

Rated inductance 1 ... 18.52 mH
Sensitivity 10 ... 50 mV/µT

Construction

- Ferrite core
- Winding: enamel copper wire welded to terminals
- Flame-retardant molding

Features

- Robust construction for a high mechanical stability
- Qualified to AEC-Q200
- High sensitivity in X/Y orientation
- Suitable for pick and place and AOI (Automatic Optical Inspection)
- Suitable for lead-free reflow soldering
- RoHS-compatible

Applications

- Car access systems
  - immobilizer
  - PEPS (Passive Entry, Passive Start)
- TPMS (Tire Pressure Monitoring Systems)

Terminals

- Base material CuSn6
- Layer composition Ni, Sn (lead-free)
- Electro-plated

Marking

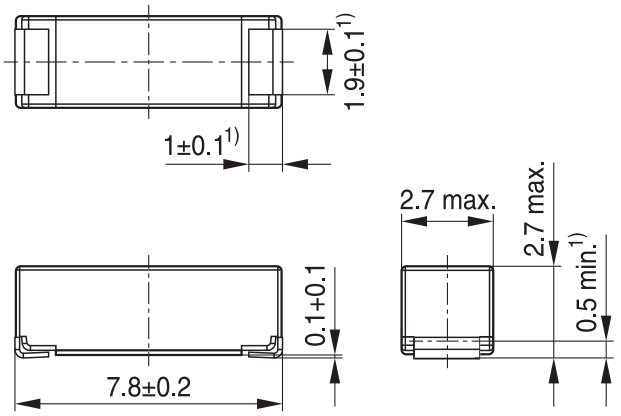
- Marking on component: Manufacturer, L value in nH, letter “E”, date of manufacture (YWWD), last five digits of lot number, internal information
- Minimum data on reel: Manufacturer, ordering code, L value, quantity, date of packing

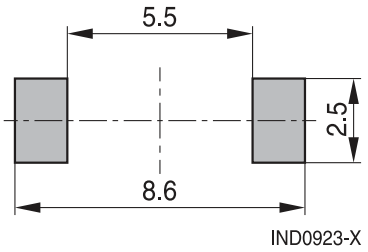
Delivery mode and packing unit

- 16-mm blister tape, wound on 330-mm ∅ reel
- Packing unit: 2500 pcs./reel

SMD

Dimensional drawing and layout recommendation





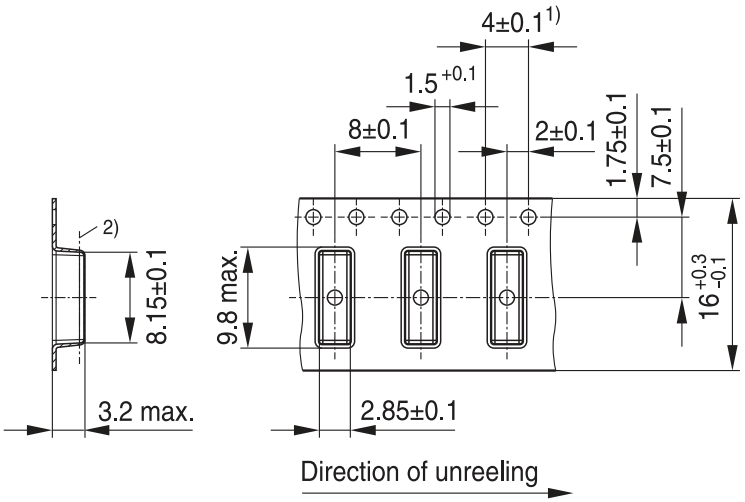
1) Soldering area

IND0903-K-E

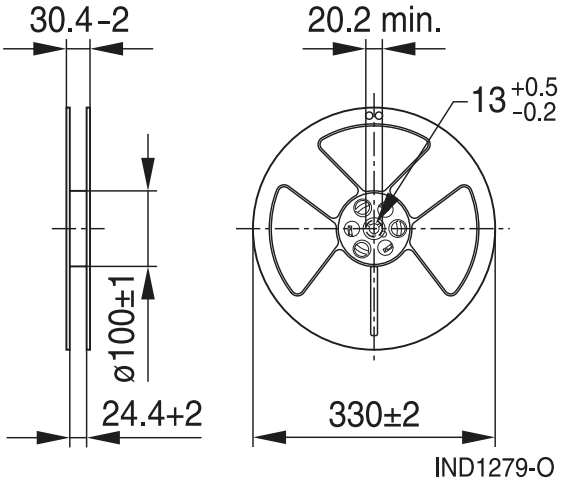
Dimensions in mm

Taping and packing

Blister tape



Reel



1) Limit tolerance over 10 pitches ±0.2
2) Reference plane for the dimensions: 8.15±0.1 and 2.85±0.1

IND1278-N-E

Dimensions in mm

Transponder coils B82450A*E

Size 7.8 x 2.7 x 2.7 (mm)

SMD

Technical data and measuring conditions

Rated inductance L_R	Measured with Agilent 4294A and test fixture Agilent 16034 at frequency f_L, RMS voltage 500 mV, +20 °C
Q factor Q_{min}	Measured with Agilent 4294A and test fixture Agilent 16034 at frequency f_Q, RMS voltage 500 mV, +20 °C
Sensitivity S_{typ}	Measured with Helmholtz coil test setup at 125 kHz
Resonance frequency f_{res}	Measuring with network analyzer Agilent 8753D, +20 °C
Solderability (lead-free)	Sn95.5Ag3.8Cu0.7: +(245 ±5) °C, 3 s Wetting of soldering area ≥ 90% (based on IEC 60068-2-58)
Climatic category	40/125/56 (to IEC 60068-1)
Storage conditions	Mounted: –40 °C … +125 °C Packaged: –25 °C … +40 °C, ≤ 75% RH
Weight	Approx. 0.25 g

Characteristics and ordering codes

L_R mH	L tolerance	Q_{min}	f_L, f_Q kHz	S_{typ} $\frac{mV}{\mu T}$	f_{res} MHz	Ordering code
1.0	±3%	35	125	10	> 3.0	B82450A1004E000
2.36		35	125	16	> 2.0	B82450A2364E000
7.2		35	125	28	> 1.0	B82450A7204E000
18.52		30	125	50	> 0.4	B82450A1855E001

Characteristics and ordering codes for other L values available on request.

Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition) and in the data sheets.
  - Particular attention should be paid to the derating curves given there.
  - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.
- If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.
  Washing processes may damage the product due to the possible static or cyclic mechanical loads (e.g. ultrasonic cleaning). They may cause cracks to develop on the product and its parts, which might lead to reduced reliability or lifetime.
- The following points must be observed if the components are potted in customer applications:
  - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
  - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.
  - The effect of the potting material can change the high-frequency behaviour of the components.
- Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

Display of ordering codes for EPCOS products

The ordering code for one and the same product can be represented differently in data sheets, data books, other publications and the website of EPCOS, or in order-related documents such as shipping notes, order confirmations and product labels. **The varying representations of the ordering codes are due to different processes employed and do not affect the specifications of the respective products**. Detailed information can be found on the Internet under www.epcos.com/orderingcodes.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.** As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.

2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified.** In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.

3. **The warnings, cautions and product-specific notes must be observed**.

4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.

5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

   We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.

7. The trade names EPCOS, Alu-X, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, ExoCore, FilterCap, FormFit, LeaXield, MiniBlue, MiniCell, MKD, MKK, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PQSine, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, TFAP, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.